

USSR/ Electronics - Testing instruments

Card 1/1 Pub. 89 - 12/27

Authors : Dzyadchik, V.; Dontsov, A.; and Tseytlih, M.

Title : Crystal triodes in defect searching instruments

Periodical : Radio 8, 23-24, Aug 1955

Abstract : A new crystal triode device for the detection of defects in underground communication lines is described. The individual elements of the searching instrument and the mode of its operation are described. Diagrams.

Institution :

Submitted :

107-57-1-27/60

AUTHOR: Shanurenko, V. and Dzyadchik, V.

TITLE: Signal System for First-Class Lines. Wire-Broadcast Development
(Signaliziruyushcheye ustroystvo dlya liniy pervogo klassa. Radiofikatsiya)

PERIODICAL: Radio, 1957, Nr 1, p 18 (USSR)

ABSTRACT: A simple system is suggested for signaling faults on wire-broadcast distribution lines working at voltages under 360 v. A two-wire ground-return loop is formed, tuned in resonance for 50 cps and fed from the power-supply line. A neon lamp connected across an inductance is normally lit, and goes out in case of a failure on the line. Circuit diagrams and parts data are supplied.

There are 3 figures in the article.

AVAILABLE: Library of Congress

Card 1/1

DZYADCHIK, V.

Pocket Z-meter and ground resistance meter. Radio no.10:32-33
0 '57. (MIRA 10:10)
(Electric meters)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000411920017-6

DZYADETSKA, R. V., Cand Biol Sci — (diss) "The Influence of Ultraviolet Radiation on the Stature and Physiological Condition of the Offspring of Cattle From One Month to a Year." Moscow, 1960, 24 pp (Moscow Order of Lenin Agricultural Institute im Timiryazyev) 120 copies, no price given (KL, 21-60, 121)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000411920017-6"

GORBUNOV, N.I.; DZYADEVICH, G.S.; TUNIK, B.M.

Determining nonsilicate amorphous and crystalline sesquioxides in soils and clays. Pochvovedenie no.11:103-111 N '61. (MIRA 14:12)

1. Pochvennyy institut imeni V.V.Dokuchayeva.
(Soils--Analysis) (Clay--Analysis)

DZYADEVICH, I.A., inzh. (Moskva)

Create an effective economic basis for large-scale irrigation
in the steppe zone. Gidr. i mel. 16 no.4:49-55 Ap '64.
(MIRA 17:6)

DZYADEVICH, I.A., inzh.

Conference on the use of plastic materials in drainage and the
operation of melioration systems. Cidr. i mel. 16 no.7:62-64
(MIRA 17:11)
Jl '64.

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni
V.I. Lenina.

BERDYSHEV, V.D., inzh. (Moskva); DZYADEVICH, I.A. inzh. (Moskva)

Session of the All-Union Academy of Agricultural Sciences on
irrigation farming in the European part of the U.S.S.R. Gidr.
i mel. 17 no.1:52-60 Ja '65. (MIRA 18:4)

DZYADEVICH, I.A., inzh. (Moskva)

Simplest device for starting irrigation siphons. Gidr. i
mel. 17 no. 848-50 Ag '65. (MIRA 18:10)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000411920017-6

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000411920017-6"

244T94

USSR/Mathematics - Approximation

Mar/Apr 53

"Best Approximation in a Class of Periodic Functions That Possess a Bounded s-th Derivative (Fractional)," V. K. Dzyadyk

"Iz Ak Nauk SSSR, Ser Matemat" Vol 17, No 2,
pp 135-162

Investigates the evaluation for the approximation (uniform also in the mean) of a class of periodic functions that possess a fractional s-th derivative ($0 < s < 1$). In particular, finds the best approximation in the mean, with the aid of

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trigonometric polynomials, of given order of the function $P_s(t) = \sum_{k=1}^{\infty} k^{-s} \cdot \cos(kt - \frac{1}{2}s\pi)$ for $0 < s < 1$.
Presented by Acad S. N. Bernsteyn 26 June 52.

244T94

DZYADIK, V. K.

"On the Best Approximation in the Mean of Differentiable
Periodic Functions." Cand Phys-Math Sci, Dnepropetrovsk State
U, Dnepropetrovsk, 1954. (RZhMat, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions (15)

Dzyadyk, V. K.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress *(Cont.) Moscow
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Gladkiy, A. V. (Barnaul). On the Effectively Unbounded
Additive Set Functions. 79

Danilyuk, I. I. (L'vov). Quasi-analytic Functions of
Many Variables on Manifolds. 79-80

Dzhrbashyan, M. M. (Yerevan). On the Weighted Polynomial
Approximations in Complex Regions. 80

Dzyadyk, V. K. (Lutsk). Precise Evaluation of the Best
Approximations for a Class of Periodical Functions. 80-82

There are 2 references, both of them USSR.

Dzyadyk, V. K. (Lutsk). On Approximations by Polynomials
of Non-periodical Functions Satisfying the Condition
 $\text{Lip } \alpha$ ($0 < \alpha < 1$). 82-83

Mention is made of Bernshteyn, S. N., Nikol'skiy, S. M.
and Timan, A. F.

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"APPROVED FOR RELEASE: 03/13/2001

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APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000411920017-6"

SUBJECT

USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 648

AUTHOR

DZJADYK V.K.

TITLE

On the continuation of functions which satisfy the Lipschitz condition in the metric of the L_p .

PERIODICAL

Mat.Sbornik,n.Ser. 40, 239-242 (1956)
reviewed 3/1957

Let the function $f(x)$ be defined on (a, b) and satisfy the conditions

$$1) f(x) \in L_p(a, b)$$

$$2) \omega_p(\delta; f; a, b) = \sup_{0 < h \leq \delta} \left(\int |f(x+h) - f(x)|^p dx \right)^{1/p} \leq M \delta^\alpha,$$

where $p \geq 1$ and M is constant. Then there exists a summable function $F(x)$

which satisfies the following conditions:

1) $F(x)$ is defined on the whole number line;

2) $F(x) = f(x)$ for $x \in (a, b)$;

3) $F(x) = L_p(-\infty, +\infty)$;

4) $\omega_p(\delta; F; -\infty, +\infty) \leq M_1 \delta^\alpha$, where M_1 is a new constant.

INSTITUTION: Luzk.

AUTHOR: Dzyadyk, V.K.

SOV/38-22-3-2/9

TITLE: On the Approximation of Functions by Simple Polynomials on a Finite Interval of the Real Axis (O priblizhenii funktsiy obyknovennymi mnogochlenami na konechnom otrezke veshchestvennoy osi)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1958,
Vol 22, Nr 3, pp 337-354 (USSR)ABSTRACT: The author starts from the statement that under suitable choice of the kernels $D_n(t)$ the functions

$$F_n(x) = \int_a^b f(t)D_n(t-x)dt \text{ approximates well each continuous}$$

function $f(x)$ in the metric of the C. The author chooses the kernels

$$D_{nk}(x) = \frac{1}{\gamma_{nk}} \left(\frac{\sin \frac{1}{2} n \pi x \cos \left(1 - \frac{x^2}{2}\right)}{\sin \frac{1}{2} \pi x \cos \left(1 - \frac{x^2}{2}\right)} \right)^{2k}, \quad x \in [-\sqrt{2}, \sqrt{2}] .$$

proves several properties of these kernels, and with their aid

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On the Approximation of Functions by Simple Polynomials SOV/38-22-3-2/9
on a Finite Interval of the Real Axis

he constructs approximating polynomial sequences for a continuous function defined on $[a, b]$. This renders possible to obtain the following results with the methods of Nikol'skiy [Ref 7] and Timan [Ref 8,9] : 1. A constructive characterization of the quasi-smooth and smooth functions. Fundamental

theorem: In order that a function $f(x)$ defined on $[a, b]$ possesses a quasi-smooth derivative

$f^{(r)}(x)$, it is necessary and sufficient that for every n there exists a polynomial $P_n(x)$ so that

$$|f(x) - P_n(x)| < \frac{c}{n^{r+1}} \left[\sqrt{(x-a)(b-x)} + \frac{1}{n} \right]^{r+1}$$

holds for all $x \in [a, b]$, where C does not depend on n and x .

2. A simple proof for a generalization of the theorem of Timan [Ref 9] : If $f^{(r)}(x)$ is continuous, then for every n there exists a $P_n(x)$, so that

$$|f(x) - P_n(x)| \leq \frac{c}{n^r} \left(\sqrt{(b-x)(x-a)} + \frac{1}{n} \right)^r \left[\omega_2^{(r)} \left(\frac{\sqrt{(b-x)(x-a)}}{n} \right) + \omega_2^{(r)} \left(\frac{1}{n^2} \right) \right]$$

where

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On the Approximation of Functions by Simple Polynomials Sov/38-22-3-2/9
on a Finite Interval of the Real Axis

$$\omega_2^{(r)}(h) = \sup_{|x_2 - x_1| \leq h} |f^{(r)}(x_1) - 2f^{(r)}\left(\frac{x_1 + x_2}{2}\right) + f^{(r)}(x_2)|$$

3. A particularly simple proof of the theorem of Weierstraß on the existence of an arbitrarily well approximating polynomial. There are 11 references, 10 of which are Soviet, and 1 French.

PRESENTED: by M.A. Lavrent'ev, Academician

SUBMITTED: January 18, 1957

1. Functions--Theory 2. Approximate computation 3. Polynomials

Card 3/3

AUTHOR: Dzyadyk, V.K. (Lutsk)

SOV/20-121-3-2/47

TITLE: Further Strengthening of the Theorem of Jackson on the Approximation of Continuous Functions by Ordinary Polynomials
(Dal'neysheye usileniye teoremy Dzheksona o priblizhenii obyknovennymi mnogochlenami nepreryvnykh funktsiy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 3, pp 403-406 (USSR)

ABSTRACT: The author proves the following theorem :
Let $f(x)$ be defined on $[a, b]$ and let there possess a continuous r -th derivative $f^{(r)}(x)$, $r \geq 0$; let
 $\omega_2^{(r)}(\delta)$ be the smoothness modulus of $f^{(r)}(x)$:

$$\omega_2^{(r)}(\delta) = \sup_{|x''-x'| \leq \delta} |f^{(r)}(x') - 2f^{(r)}\left(\frac{x'+x''}{2}\right) + f^{(r)}(x'')|$$

where x' , $x'' \in [a, b]$. Then there exists for each $n = 1, 2, \dots$ an ordinary polynomial $P_n(x)$ of at most n -th degree, so that for each $x \in [a, b]$ it holds :

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Further Strengthening of the Theorem of Jackson on the SOV/20-121-3-2/47
Approximation of Continuous Functions by Ordinary Polynomials

$$|f(x) - P_n(x)| \leq \frac{c}{n^r} \left(\sqrt{(b-x)(x-a)} + \frac{1}{n} \right)^r \left[\omega_2^{(r)} \left(\frac{\sqrt{(b-x)(x-a)}}{n} \right) + \omega_2^{(r)} \left(\frac{1}{n} \right) \right]$$

Here the constant C does not depend on n .
For the proof the author uses the method due to himself
[Ref 5] for the approximation of the quasi-smooth functions
(i.e. of such functions for which it is $\omega_2(\delta, f) = o(\delta)$). The
author generalizes the former results of Jackson, Nikol'skiy
[Ref 1] , Timan [Ref 2,3] .

There are 6 references, 5 of which are Soviet, and 1 French.

ASSOCIATION: Lutskiy gosudarstvennyy pedagogicheskiy institut imeni Lesi
Ukrainki (Lutsk State Pedagogical Institute imeni Lesya
Ukrainka)

PRESENTED: March 18, 1958, by M.A.Lavrent'yev, Academician

SUBMITTED: February 15, 1958

Card 2/2

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~~46(4)~~ 16.300005701
SOV/38-23-5-5/8

AUTHOR: Dzyadyk, V.K.

TITLE: On the Problem of S.M. Nikol'skiy in the Complex Domain

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1959,
Vol 23, Nr 5, pp 697 - 736 (USSR)ABSTRACT: Let \mathcal{M} be a bounded closed set with simply connected complement G , the boundary C_1 of which consists of finitely many Jordan arcs. Let $\psi(z)$ map conformally the exterior of \mathcal{M} onto

$\Psi(z)$

to the exterior of the unit circle, where $\lim_{z \rightarrow \infty} z$ is assumed to exist, to be positive and finite. Let $\psi^{-1}(w)$ be the inverse function of $\psi(z)$. Let C_R ($R \geq 1$) denote the equipotential line $|\psi(z)| = R$ and for $z \in C_1$ and $\tilde{z} \in C_R$ let

$$(2.1) \quad g_R(z) = \min_{z^1 \in C_R} |z^1 - z|, \quad \bar{s}_R(\tilde{z}) = \min_{z^1 \in C_1} |z^1 - \tilde{z}|$$

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On the Problem of S.M. Nikol'skiy in the Complex
Domain

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SOV/38-23-5-5/8

\mathcal{M} is said to have the property (A^*), if there exists a number $\bar{R} = \bar{R}(\mathcal{M}) > 1$ so that
1.) every C_R ($1 \leq R \leq \bar{R}$) can be decomposed into $N < \infty$ arcs

$C_R^{(1)}, C_R^{(2)}, \dots, C_R^{(N)}$, where it holds :

$$(2.2) \quad s(z_1, z_2) = \sum_{z_1}^{z_2} |dz| \leq A_4 |z_2 - z_1|, \quad z, z_1, z_2 \in C_R^{(i)}, \quad i = 1, 2, \dots, N$$

where it is $A_4 = A_4(\mathcal{M}) = \text{const.}$

2.) For all $z \in C_1$, $\tilde{z} \in C_R$, $1 < R < R_1 \leq \bar{R}$ it holds

$$(2.3) \quad a.) |\varphi^{-}[R \varphi(z)] - z| \leq A_5 \varrho_R(z),$$

$$b.) |\tilde{z} - \varphi^{-}\left[\frac{1}{R} \varphi(\tilde{z})\right]| \leq A_5 \tilde{\varrho}_R(\tilde{z}),$$

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SOV/38-23-5-5/8On the Problem of S.M. Nikol'skiy in the Complex
Domain

$$\text{a.) } A_5' \cdot g_{R_1}(z) \leq |\varphi^{-}[R_1, \varphi(\tilde{z})] - \tilde{z}| \leq A_5 \cdot g_{R_1}(z), \\ z = \varphi^{-}\left[\frac{\varphi(\tilde{z})}{R}\right]$$

where $A_5 = A_5(\mathcal{M})$, $A_5' = A_5'(\mathcal{M})$ are constants. A set with the property (A*) is called as a set of the type (A**)

if it satisfies the following additional conditions :

3.) on every arc z_1, z_2 of C_1 there exists at least one point

z^* so that for all $z \in z_1, z_2$ and $1 < R \leq \bar{R}$ it holds

$$(2.4) \quad g_R(z) \leq A_6 \cdot g_R(z^*), \quad A_6 = A_6(C_1) = \text{const}.$$

4.) let $z_0 \in C_1^{(i)}$ ($i = 1, 2, \dots, N$), $1 < R \leq \bar{R}$, $L \geq 1$ ($L = \text{const}$),

$|z - z_0| \leq L \cdot g_R(z_0)$, $z \in C_1^{(i)}$; then it is

$$(2.5) \quad A_7' \cdot g_R(z_0) < g_R(z) < A_7 \cdot g_R(z_0);$$

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On the Problem of S.M. Nikol'skiy in the Complex
Domain

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the constants A_7 , A'_7 only depend on C_1 and L .

Theorem 4.1 : Let a function $f(z)$ be given on the set \mathcal{M} of the type (A^{+x}) . Let a polynomial $P_n(z)$ of at most n -th degree exist for every integer $n \geq n_0$ so that

$$(4.1) \quad |f(z) - P_n(z)| \leq A_{48} \left[g_{1+\frac{1}{n}}(z) \right]^{r+\alpha}$$

holds for all $z \in C_1$, where r is integer ≥ 0 , $0 < \alpha < 1$ and A_{48} is the same constant for $n = n_0, n_0 + 1, n_0 + 2, \dots$

Then $f(z)$ is everywhere analytic in the interior of \mathcal{M} , continuous on $\partial\mathcal{M}$ and possesses in all points $z \in \mathcal{M}$ an r -th derivative $f^{(r)}(z)$ belonging to the class Lip α .

The author mentions S.N. Bernshteyn, S.M. Nikol'skiy, A.F. Timan, M.K. Potapov, G.K. Lebed', Yu.A. Brudnyy, and S.N. Mergelyan.

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On the Problem of S.M. Nikol'skiy in the Complex
Domain

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SOV/38-23-5-5/8

There are 3 figures, and 25 references, 16 of which are
Soviet, 4 German, 3 American, 1 English, and 1 Polish.

PRESENTED: by S.L. Sobolev, Academician

SUBMITTED: October 26, 1957

Card 5/5

16(1) 16.4100 16.4200

AUTHOR: Dzyadyk, V.K.

SOV/38-23-6-9/11

TITLE: On Best Approximation on the Classes of Periodic Functions
Defined by Kernels Which are Integrals of Absolutely Monotone
Functions

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1959,
Vol 23, Nr 6, pp 933 - 950 (USSR)

ABSTRACT: The author considers the functions

$$(1.2) \quad f(t) = \frac{1}{\pi} \int_0^{2\pi} K(\xi) \varphi(t - \xi) d\xi,$$

where $K(\xi)$ is a function summable on $[0, 2\pi]$ and absolutely monotone on $(-\infty, 2\pi)$ or a periodic integral of such a function. Let $E_n(f)_C$ and $E_n(f)_L$ be the best approximations of $f(x)$ by trigonometric polynomials $T_{n-1}(t)$. The author gives rigorous values for $\sup_f E_n(f)_C$ and $\sup_f E_n(f)_L$, if classes of functions runs through certain f corresponding to the nature of φ . The calculation of the mentioned values is

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On Best Approximation on the Classes of Periodic Functions Defined by Kernels Which are Integrals of Absolutely Monotone Functions

SOV/38-23-6-9/11
essentially based on the following theorem : If $K(t)$ is absolutely monotone on $(-\infty, 0)$ (or $(-\infty, 0]$) and $a < -2\pi$ (or $a \leq -2\pi$), then the trigonometric polynomial $T_n(t)$ interpolates the function $K(t)$ on $(a, a + 2\pi]$ in at most $2n + 1$ points.

The author especially determines the exact upper bound of the best approximations in the classes of the periodic functions with bounded s -th ($s > 0$) derivative, whereby the problem posed by Favard [Ref 25] is completely solved. Altogether the author gives 13 theorems and several lemmata.

He mentions N.I. Akhiyezer, M.G. Kreyn, S.M. Nikol'skiy, S.B. Stechkin, S.N. Bernshteyn and A.A. Markov.

There are 25 references, 19 of which are Soviet, 2 French, 1 Danish, 1 American, 1 Polish, and 1 German.

PRESENTED: by S.L. Sobolev, Academician
SUBMITTED: December 8, 1958

Card 2/2

16(1)

AUTHOR:

Dzyadyk, V.K.

SOV/ 20-127-3-6/71

TITLE:

Inverse Theorems on the Approximation of Functions in Regions
With Angular Singularities

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 505-508 (USSR)

ABSTRACT: Let \mathcal{M} be a bounded closed set with simply connected complement G , the boundary of which consists of finitely many Jordan curves. Let the function $\varphi(z)$ map conformally the exterior of \mathcal{M} onto the exterior of the unit circle so that
$$\lim_{z \rightarrow \infty} \frac{\varphi(z)}{z}$$
 is finite positive. Let $C_R (R > 1)$ denote the equi-potential line $|\varphi(z)| = R$ and $\varsigma_R(z) = \min_{z' \in C_R} |z' - z|$.For sets of the type A^* characterized by four longer conditions there holds the fundamental theorem:
Theorem: Let on \mathcal{M} of the type A^* a function $f(z)$ be defined. Let a polynomial of at most n -th degree $P_n(z)$ exist to

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Inverse Theorems on the Approximation of Functions
in Regions With Angular Singularities

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every n so that for all $z \in C_1$, it holds

$|f(z) - P_n(z)| \leq A [S_{1+1/n}(z)]^{r+\alpha}$, where r is positive integer, $0 < \alpha < 1$, A a constant equal for $n = 1, 2, \dots$. Then $f(z)$ is analytic in all interior points of \mathcal{M} , continuous on \mathcal{M} and possesses an r -th derivative in all points $z \in \mathcal{M}$ which belongs to the class Lip^α on \mathcal{M} .

Four further similar theorems are given. The author mentions S.N. Bernshteyn, S.M. Nikol'skiy, A.F. Timan, G.K. Lebed'. There are 14 references, 12 of which are Soviet, 1 German, and 1 American.

ASSOCIATION: Lutskiy gosudarstvennyy pedagogicheskiy institut imeni Iesya Ukrainki (Lutsk State Pedagogical Institute imeni Iesya Ukrainka)

PRESENTED: April 10, 1959, by M.A. Lavrent'yev, Academician
SUBMITTED: March 30, 1959

Card 2/2

66460

3

16(1), 16(2) 16.4100 16.4200

AUTHOR: Dzyadyk, V.K.

SOV/20-129-1-4/64

TITLE: On the Best Trigonometric Approximation in the L Metric of Some Functions

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1, pp 19-22 (USSR)

ABSTRACT: The author formulates without proof six long theorems on trigonometric approximations in the L metric, e.g.:

Theorem 1: Let

$$(1) \quad \varphi(t) = \sum_{j=0}^{\infty} a_j t^j, \quad t \in [0, 2\pi]$$

be a function summable on $[0, 2\pi]$; let a_j be arbitrary non-negative numbers, let the radius of convergence be $\geq 2\pi$. Let $T_n^*(t)$ be the polynomial of at most n-th degree interpolating the function in the points $\frac{k\pi}{n+1}$, $k=1, 2, \dots, n+1$. Then among all trigonometric polynomials of at most n-th degree T_n^* is that one which approximates the function best (in the L metric) and it holds

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On the Best Trigonometric Approximation in the
L Metric of Some Functions

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$$(2) E_n(\varphi)_L = \inf_{T_n} \int_0^{2\pi} |\varphi(t) - T_n(t)| dt = \int_0^{2\pi} |\varphi(t) - T_n^*(t)| dt = \\ = - \int_0^{2\pi} \varphi(t) \operatorname{sign} \sin(n+1)t dt = \\ = \sum_{j=1}^{\infty} \frac{a_j}{j+1} \left(\frac{\pi}{n+1} \right)^{j+1} \left[(2n+2)^{j+1} - 2 \sum_{k=1}^{2n+1} (-1)^{k-1} k^{j+1} \right].$$

Theorem 2: Let $K(t)$ have an absolutely monotone derivative $K'(t)$ on $(-\infty, 2\pi)$ or $(-\infty, 2\pi]$. Then

$$(3) K(t) - T_n(t) = 0$$

has not more than $2n+1$ roots on $[0, 2\pi]$ or $(0, 2\pi]$, $n=1, 2, \dots$; $T_n(t)$ is a trigonometric polynomial of at most n -th degree.

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66460

On the Best Trigonometric Approximation in the
L Metric of Some Functions

S07/20-129-1-4, 64

With the aid of the formulated theorems a problem can be solved
which was formulated in 1937 by Favard [Ref 2].

The author mentions N.I.Akhiezer, M.G.Kreyn, and S.M.Nikol'skiy.
There are 10 references, 6 of which are Soviet, 2 French, 1 German,
and 1 Polish.

ASSOCIATION: Lutskiy gosudarstvennyy pedagogicheskiy institut imeni Lesi
Ukrainki (Lutsk State Pedagogical Institute imeni Lesya Ukrainka)

PRESENTED: June 30, 1959, by I.M.Vinogradov, Academician

SUBMITTED: June 29, 1959

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Card 3/3

DZYADIK, V.K. Dr. Phys-Math Sci - (diss) "Investigation of the approximative and geometric characteristics of certain classes of functions," Lutsk-Moscow, 1960, 32 pp (Lutsk State Pedagogical Institute im Lesa Ukrainka) (KL, 34-60, 119)

16.3000

77803
SOV/42-15-1-10/27AUTHOR: Dzyadyk, V. K.

TITLE: Geometric Definition of Analytic Functions

PERIODICAL: Uspekhi matematicheskikh nauk, 1960, Vol 15,
Nr 1, pp 191-194 (USSR)ABSTRACT: The definition is a consequence of the theorem:
Let there be given in some domain G, two real
valued functions $u(x, y)$ and $v(x, y)$ which are
continuous with their first partial derivatives,
 U_x, U_y, V_x, V_y . Then in order that the function

$$f(x + iy) = u(x, y) + iv(x, y) \quad (1)$$

be analytic or be the conjugate of an analytic
function in the domain G, it is necessary and
sufficient that all three surfaces

Card 1/4

$$z = u(x, y), \quad z = v(x, y) \quad \text{and} \quad z = \sqrt{u^2(x, y) + v^2(x, y)} \quad (2)$$

Geometric Definition of Analytic Functions

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over some arbitrary domain, $g \subset G$ have the same areas. The definition is then as follows: Let there be given in some domain G , two real-valued functions $u(x,y)$ and $v(x,y)$ which are continuous with their first partial derivatives, u_x, u_y, v_x, v_y .

Then the function

$$f(x+iy) = u(x,y) + iv(x,y)$$

C is said to be analytic in the domain $g \subset G$ if, (1) all three surfaces in Eq. (2) over some arbitrary domain $g \subset G$ have the same area and in the case when in G there exist points for which $(u'_x)^2 + (u'_y)^2 > 0$ then at least at one such point the Cauchy-Riemann equations are satisfied:

$$u_x = v_y; u_y = -v_x$$

The following are consequences of the above: (1)

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$$|f'(x + iy)| = |\text{grad } f(u^2(x, y) + v^2(x, y))|. \quad (10)$$

(2) From the fact that for harmonic and conjugate functions $u(x, y)$ and $v(x, y)$ the following holds

$$u_{xx}^2 u_{yy}^2 - (u_{xy}^2)^2 = -(v_{xy}^2)^2 - (u_{xy}^2)^2 = v_{xx}^2 v_{yy}^2 - (v_{xy}^2)^2,$$

it is seen that the surfaces $z = u(x, y)$, $z = v(x, y)$ have at all points the same Gaussian curvature and that the curvature is always negative or zero. At the same time it is possible to find a series of surfaces $z = |u^2(x, y) + v^2(x, y)|$ with positive Gaussian curvature. This implies that there exist surfaces which, over some domain, have the same area but at the same time do not superimpose on each other. Examples of such surfaces are

$$z = \text{Re } \{(x + iy)^2\} = x^2 - y^2 \text{ and } z = |x + iy|^2 = x^2 + y^2.$$

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(3) There exist surfaces which do not superimpose on each other but at the same time, (1) at each point have the same Gaussian curvature; (2) over arbitrary domain have same areas. Examples of such surfaces are

$$z = \ln \sqrt{x^2 + y^2} \text{ or } z = \arg(x + iy).$$

SUBMITTED: July 28, 1958

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"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000411920017-6

DZYADYK, V.K.

One property of almost periodic polynomials. Ukr.mat.zhur. 13 no.4:96-
98 '61. (MIRA 15:7)
(Polynomials)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000411920017-6"

22853

S/038/61/025/002/001/002

C111/C222

16.4100 16.4200

AUTHOR: Dyadyk, V.K.

TITLE: On the question of the best approximation with the aid of trigonometric polynomials of absolutely monotone and some other functions in the metric L

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya matematicheskaya, v.25, no.2, 1961, 173-238

TEXT: The paragraphs 1,2,3 contain a great number of auxiliary results on the displacement of the zeros of a trigonometric polynomial by differentiation and on the maximal number of roots of certain transcendental equations as well as a trigonometric interpolation formula for the case of knot points X

$$x_1 = \frac{\pi}{n+1}, \quad x_2 = \frac{2\pi}{n+1}, \dots, x_k = \frac{k\pi}{n+1}, \dots, x_{2m+1} = \frac{2m+1}{n+1}\pi. \quad (3.1)$$

In § 4 the author considers the interpolation of the function

$$\varphi(x) = \sum_{k=0}^{\infty} a_k x^k \quad (a_k \geq 0) \text{ on } [0, 2\pi].$$

Theorem 4.1: Let the function $\varphi(x)$ be defined by the series

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$$\varphi(x) = \sum_{j=0}^{\infty} a_j x^j, \quad x \in [0, 2\pi), \quad (4.10)$$

where a_j are arbitrary non-negative numbers, where $\lim_{j \rightarrow \infty} \sqrt[j]{a_j} < \frac{1}{2\pi}$. Let

$T_n(x)$ be a trigonometric polynomial of at most n -th order (n -- natural number) which interpolates $\varphi(x)$ in the points

$$t_k = \frac{k\pi}{n+1}, \quad k=1, 2, \dots, n+1. \quad (4.11) \quad X$$

Then: $T_n(x)$ interpolates $\varphi(x)$ only in the points t_k , where the difference $\varphi(x)-T_n(x)$ changes its sign in these points so that

$$\text{sign}[\varphi(x)-T_n(x)] \equiv -\text{sign} \sin(n+1)x, \quad x \in [0, 2\pi). \quad (4.12)$$

The proof of the theorem is based on 6 partially very long lemmas which are difficultly surveyable with respect to their consequence.

In § 5 the author proves with the aid of the results of § 2 and § 4:

Theorem 5.1: Let

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$$\varphi(x) = \sum_{j=0}^{\infty} a_j x^j, \quad x \in [0, 2\pi] \quad (5.1)$$

be a function summable on $[0, 2\pi]$, where a_j are arbitrary non-negative numbers, and the radius of convergence of $\sum a_j x^j$ is greater than or equal to 2π ; or let $\varphi(x)$ be an analytic and summable function on $(0, 2\pi)$ with the form

$$\varphi(x) = \int_{2n}^{\infty} x^s d\zeta(s), \quad (5.1')$$

where $\zeta(s)$ is a function non-decreasing on $[2n, \infty)$. Let $T_n^*(x)$ be a trigonometric polynomial of at most n -th order which interpolates $\varphi(x)$ in the points $x_k = \frac{k\pi}{n+1}$ ($k=1, 2, \dots, 2n+1$). Then among all polynomials $T_n(x)$ of at most n -th order... $T_n^*(x)$ is the polynomial of the best approximation for $\varphi(x)$ in the metric L , where for $\varphi(x)$ of the form (5.1) it holds.

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On the question of the best approximation...

$$\begin{aligned}
 E_n(\varphi)_L &= \inf_{T_n} \int_0^{2\pi} |\varphi(x) - T_n(x)| dx = \int_0^{2\pi} |\varphi(x) - T_n^*(x)| dx = \\
 &= - \int_0^{2\pi} \varphi(x) \operatorname{sign} \sin(n+1)x dx = \\
 &= \sum_{j=1}^{\infty} \frac{a_j}{j+1} \left(\frac{\pi}{n+1} \right)^{j+1} \left[(2n+2)^{j+1} - 2 \sum_{k=1}^{2n+1} (-1)^{k-1} k^{j+1} \right], \quad (5.2)
 \end{aligned}$$

and for $\varphi(x)$ of the form (5.1') it holds

$$\begin{aligned}
 E_n(\varphi)_L &= \inf_{T_n} \int_0^{2\pi} |\varphi(x) - T_n(x)| dx = \int_0^{2\pi} |\varphi(x) - T_n^*(x)| dx = \\
 &= - \int_0^{2\pi} \varphi(x) \operatorname{sign} \sin(n+1)x dx = \\
 &= \int_{-2n}^{2n} \left(\frac{\pi}{n+1} \right)^{s+1} \left[(2n+2)^{s+1} - 2 \sum_{k=1}^{2n+1} (-1)^{k-1} k^{s+1} \right] \frac{d\varphi(s)}{s+1}. \quad (5.2')
 \end{aligned}$$

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Theorem 5.2: Let $\varphi(x)$ on $(0, 2\pi)$ be a continuous summable function having finite or infinite limit values $\varphi(0+0)$ and $\varphi(2\pi-0)$ at the ends of $(0, 2\pi)$ and having the property that every equation $\varphi(x) - T_n(x) = 0$, where $T_n(x)$ is a trigonometric polynomial of at most n -th order, in the interval $(0, 2\pi)$ has at most $2n+2$ roots (with consideration of multiplicities). Let

$$\psi(\xi) = \varphi(x_{2n+1} + \xi) - \varphi(x_{2n} + \xi) + \dots - \varphi(x_2 + \xi) + \varphi(x_1 + \xi), \quad (5.3)$$

where $x_k = \frac{k\pi}{n+1}$, $k=1, 2, \dots, 2n+1$, $\xi \in (-\frac{\pi}{n+1}, \frac{\pi}{n+1})$. Then it holds:

1) If

$$\psi(0) < \min\{\varphi(0+0), \varphi(2\pi-0)\} \text{ or } \psi(0) > \max\{\varphi(0+0), \varphi(2\pi-0)\}, \quad (5.4)$$

then there exists a unique point $\xi_0 \in (0, x_1) = (0, \frac{\pi}{n+1})$ so that it holds

$$\varphi(x_{2n+1} + \xi_0) - \varphi(x_{2n} + \xi_0) + \dots$$

$$\dots - \varphi(x_2 + \xi_0) + \varphi(x_1 + \xi_0) - \varphi(\xi_0) = \psi(\xi_0) - \varphi(\xi_0) = 0. \quad (5.5)$$

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2) Among the trigonometric polynomials T_n of at most n-th order that polynomial T_n^* is the polynomial of the best approximation of the function $\varphi(x)$ in the metric L which interpolates $\varphi(x)$ in the points

$$\xi_0, \xi_0+x_1, \xi_0+x_2, \dots, \xi_0+x_{2n},$$

where ξ_0 is a root of (5.5) if (5.4) is satisfied and $\xi_0 = \frac{\pi}{n+1}$ if it holds

$$\min\{\varphi(0+0), \varphi(2\pi-0)\} \leq \varphi(0) \leq \max\{\varphi(0+0), \varphi(2\pi-0)\}; \quad (5.4')$$

here it holds

$$E_n(\varphi)_L = \left| \int_0^{2\pi} |\varphi(x) - T_n^*(x)| dx - \left| \int_0^{2\pi} \varphi(x) \operatorname{sign} \sin[(n+1)(x - \xi_0)] dx \right| \right|. \quad (5.6)$$

3) If (5.4) is satisfied and

$$\varphi(x) \sim \frac{a_0}{2} + \sum_{k=1}^{\infty} (a_k \cos kx + b_k \sin kx),$$

then ξ_0 is a root of

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$$\sum_{j=0}^{\infty} \{a_{(n+1)(2j+1)} \cos[(n+1)(2j+1)\xi] + b_{(n+1)(2j+1)} \sin[(n+1)(2j+1)\xi]\} = 0. \quad (5.7)$$

Further analogous assertions are given on functions $\varphi(x)$ belonging to certain more special classes...

In §6 \mathcal{M}_M and \mathcal{M}_L denote classes of periodic essentially bounded measurable or summable functions $\alpha(x)$ which satisfy

$$\text{ess sup } |\alpha(x)| \leq 1 \quad \text{or} \quad \int_0^{2\pi} |\alpha(x)| dx \leq 1. \quad (5.12) \quad X$$

Let furthermore $K(x)$ be summable on $[0, 2\pi]$. Then the class of functions

$$f(x) = \frac{1}{\pi} \int_0^{2\pi} K(t) \alpha(x-t) dt \quad (5.13)$$

is denoted by K_C for $\alpha(x) \in \mathcal{M}_M$ and by K_L for $\alpha(x) \in \mathcal{M}_L$. If besides $\alpha(x)$ satisfies the condition

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$$\int_0^{2\pi} \alpha(x) \begin{cases} \cos kx \\ \sin kx \end{cases} dx = 0, \quad k=0,1,2,\dots,m-1 \quad (5.14)$$

then there appear the subclasses K_{C_m} , K_{L_m} . The magnitudes $E_n [K_C]$ -
 $= \sup_{f \in K_C} E_n(f)_C$, $E_n [K_L] = \sup_{f \in K_L} E_n(f)_L$ etc. are called the best
approximations in the classes K_C , K_L etc. On the best approximations in
these classes the author proves: If $K(x)$ is absolutely monotone and
summable on $[0, 2\pi]$ then for the functions (5.13) and every $m=0,1,2,\dots,n$
it holds:

$$E_n [K_{C_m}] = \sup_{f \in K_{C_{m+1}}} \|f\|_C = E_n(K)_L = \int_0^{2\pi} |K(x) - T_n(x)| dx, \quad (5.15)$$

$$E_n [K_{L_m}] = \sup_{f \in K_{L_{m+1}}} \|f\|_L = E_n(K)_L = \int_0^{2\pi} |K(x) - T_n(x)| dx, \quad (5.15')$$

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where the polynomial $T_n^*(x) = T_n^*(K;x)$ can be determined according to the theorems of § 5.

Altogether the paper contains 26 lemmas and theorems having very long formulations and very extensive proofs.

The author mentions S.M.Nikol'skiy, N.I.Akhiezer, M.G.Kreyn and A.A.Markov. There are 5 Soviet-bloc and 3 non-Soviet-bloc references.

SUBMITTED: August 11, 1959

Card 9/9

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On the approximation of continuous functions in closed regions containing angles, and S.M.Nikol'skii's problem. Part 1. Izv. AN SSR.Ser.mat. 26 no.6:797-824 N-D '62. (MIRA 15:12)

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Theorems on the transformation and approximation of analytic
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DZYADYK, V.K. (Kiyev); GALAN, D.M. (Kiyev)

Approximation of analytic functions in regions with a smooth
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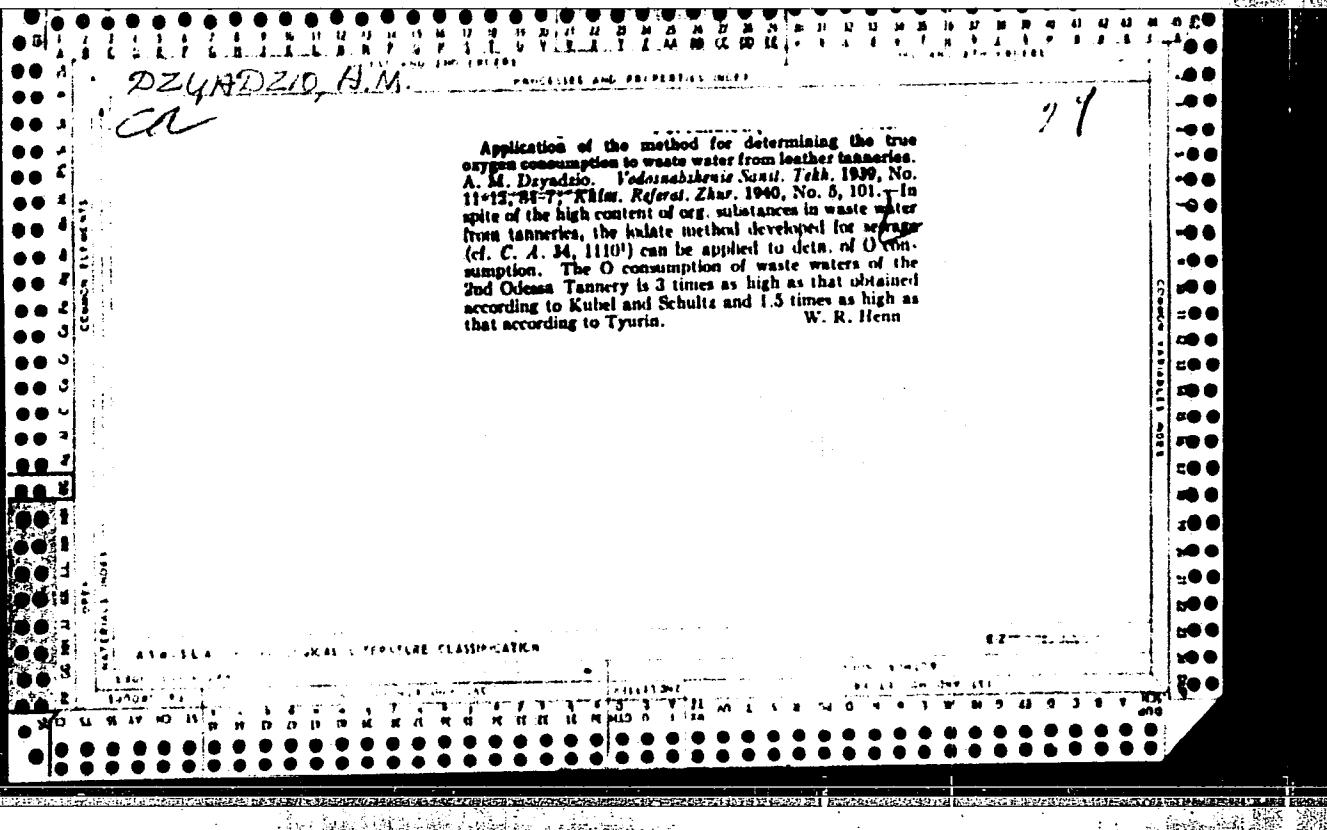
DOVBYK, V.E. (Klyer)

Simple example of a continuous periodic function not expandable into
a Fourier series. Ukr. mat. zhur. 17 no.4:103-104 '65.
(MIRA 18:8)

92-642310 K.W.
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The true oxygen consumption of sewage and a method for its determination. A. M. Drygasina, *Pedobiologische Sankt. Tikh. 1938*, No. 8, p. 117-25; Akhie, *Referat Zhar.*, 2, No. 3, 80 (1939). The different methods of Kuhel, of Schulze and of Tyman for the determination of oxygen consumption of sewage and of org. substances were verified. The new method is: Pour into a flask equipped with a reflux condenser a 5% soln. of $K_2Cr_2O_7$, add some concd. H_2SO_4 soln., and 3 cc. of the liquid under investigation and 2-3 beads of a capillary. The concn. of H_2SO_4 should be 65-70% by vol. Heat gradually to 20°. The oxidation of the org. substance begins with an evolution of SO_2 vapors and can be considered completed when the evolution ceases. Cool the flask, add 40-50 cc. of H_2O , transfer the contents of both the capill. and the control flask into larger flasks, dil. with water to 300-400 cc., add 1 cc. of a 10% soln. of KI , stopper, place for 10-15 min. in a dark place and titrate with a 0.1 N $Na_2S_2O_3$ soln. By this method 14 org. proprps. were investigated. The error did not exceed 2.5%. By far the most org. substances were oxidized to 100% in limits of analytical errors. The method is superior not only to the methods of Kuhel and of Schulze for the determination of the O consumption but also to the method employing $K_2Cr_2O_7$. W. R. Henm

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Flour Mills

Designing mills. G. M. Leviatin. Reviewed by A. M. Dzyadzio, S. M. Zolotarev. Sov. kniga No. 3, 1953.

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1. Odesskiy tekhnologicheskiy institut im. I.V.Stalina.
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"APPROVED FOR RELEASE: 03/13/2001

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BARIN, G.O.; BELETSKIY, V.Ya.; VORONKOV, P.I.; DEMIDOV, P.G.; DZYADZIO, A.M.;
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(Cereal products) (Pneumatic-tube transportation)

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High-pressure ventilators with increased efficiency co-efficient. Muk.-elev. prom. 26 no. 11:27-29.N '60. (MIRA 13:17)

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DZYADZIO, Aleksandr Mikhaylovich; KEYZER, V.A., red.; STRAKHOVA, G.V.,
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[Pneumatic conveying in grain-handling enterprises] Pnevmaticheskii
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(Pneumatic conveying)
(Dynamics of particles)

DZYGALO, A.I.

PHASE I BOOK EXPOSITION

SOV/926

Leningrad. Institut inzhenerov shosseizpodorozhnogo transporta
Avtomatika, telemekhanika i svyaz' (Automation, Telemechanics,
and Communications). Moscow, Transradio, 1960. 230 p.
(Series: Issl. Sbornik, vyp. 169) 1,000 copies printed.

General Ed.: V. M. Litov, Professor; Ed.: G. I. Matenova,
Engineer; Tech. Ed.: Ye. N. Bobrova.

PURPOSE: This book is intended for technical personnel and
scientists engaged in the fields of automation, telemechanics,
and communications.

CONTENTS: This collection of articles presents various methods
of analysis and synthesis of electric circuits. New designs
are described and ways of improving technical and economic
indices of communication instruments investigated. The
articles contain computations for individual types of communica-
tions and telemechanical systems. No personalities are
mentioned. Some of the articles are accompanied by references.

Editorial Board: Engineer. Possibility of Substituting
Mechanical Relays by Communications for Wire Communi-
cations on Railroad. Selection of Multiplexing Equipment 123

The author presents this system and discusses division of
channels in radio relay communication systems to be used
simultaneously in railroad transportation as substitutes
for wire communications. Includes also some
elements of channel formation and separation for various
railroad transportation services.

Sverdlikov, D. Ya., Candidate of Technical Sciences, Doctor
Scientist. Investigation of the Possibility of Using a Relay
Electron as the Output Stage of a Pulse-Modulation Trans-
mitter of a Radio Relay System 130

Having determined the useful power, pulse shape and
frequency of radio pulse frequency or
relays, the author concludes that they may
be used as output stages of radio relay transmitters
operating on above range communication links of railroad

Editorial Board: Candidate of Technical Sciences, Doctor
Piezoelectric Filter With Elastic Mechanical Bonds Between
Crystals 135

The author presents several variants of bridges circuits
with quartz piezoelectric and ceramic resonators for the
design of a quartz filter with mechanical bonds. There
are two references, both Soviet.

Bogutin, S. I., Candidate of Technical Sciences, Doctor.
Planning of Railway Division Communications which
will define the telephone connections between railroad
stations within the limits of a railway division
approximately 50 to 150 kilometers long. There are 3
references, all Soviet.

Popov, I. P., Candidate of Technical Sciences, Doctor. Marx 156
The article describes the operation of telegraph communica-
tions between railroad stations and suggests methods of
improving their reliability.

Dzhank, D. V., Engineer. Speech Oscillators Using Ferromag-
netic Core for the Cathode-Ray Tube. Marx 162

The author describes the cathode-ray tube tracer as
an instrument used for the detection of frequency and
characteristic measurements. He author describes the
design of both the high- and low-frequency cathode-ray
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inductance core for which there is no set widely
used material. There is 1 Soviet reference.

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Formol reaction and viscosity of formalized blood serum in
rheumatism and subacute septic endocarditis. Vrach. delo no.1:89-91
Ja '57 (MLRA 10:4)

1. Fakul'tetskaya terapeuticheskaya klinika (zav.-prof. B.A.
Zalkind Dnepropetrovskogo meditsinskogo instituta.
(RHEUMATIC FEVER) (ENDOCARDITIS) (SERUM)

DZYAK, V.N., dotsent; GORBENKO, V.N., dotsent

Adrenocorticotropic hormone for treating some diseases of the
internal organs. Vrach.delo no.8:875 Ag '57. (MLRA 10:8)

1. Kafedra fakul'tetskoy terapii (zav. - prof. B.A.Zalkind) i kafedra
gospital'noy terapii (zav. - prof. I.S.Slutskiy [deceased]) Dnepro-
petrovskogo meditsinskogo instituta
(VISCERA--DISEASES) (ACTH)

DZYAK, V.N., kandidat meditsinskikh nauk (Dnepropetrovsk); VINOGRADOV,
L.A.(Dnepropetrovsk)

A rare case of nasal and gastrointestinal myiasis. Klin. med.
35 no.1:109-112 Ja '57 (MLRA 10:4)

1. Iz kafedry fakul'tetskoy terapii (zav.-prof. B.A. Zalkind) i
kafedry biologii i parazitologii (zav.-dotsent V.L. Gerbil'skiy)
Dnepropetrovskogo meditsinskogo instituta.

(MYIASIS, case report

Calliphora, of nose, & stomach & intestines)

(NASAL CAVITY, dis.

myiasis of Calliphora)

(GASTROINTESTINAL DISEASES

same)

DZYAK, Viktor Nikolayevich, for Doctor of Medical Sciences on the basis
of the dissertation defended 11 June 1959 in the Council of the Kiev
Order of Labor Red Banner Medical Institute im. Acad. Bogomolets, em-
titled: "Determination of the Acuteness of the Rheumatic Process in
Patients with Diseases of the Heart." (BNISSO USSR, 2-61, 19)

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19

DZYAK, V.N., dotsent

Determination of the activity of the rheumatic fever process in
patients with heart defects. Vrach.delo no.6:587-591 Je '59.
(MIRA 12:12)

1. Dnepropetrovskiy meditsinskiy institut i Ukrainsky nauchno-
issledovatel'skiy institut klinicheskoy meditsiny im. akademika
N.D. Strazhesko.
(RHEUMATIC FEVER) (HEART--DISEASES)

DZYAK, V.N., dotsent; BEZBOROD'KO, B.N., dotsent

So-called ambulatory forms of rheumatic fever in adults. Vrach.delo
no.11:28-31 N '60. (MIRA 13:11)

1. Kafedra gospital'noy terapii II (zav. - dotsent V.N.Dzyak)
Dnepropetrovskogo meditsinskogo instituta.
(RHEUMATIC FEVER)

DZYAK, V.N., dotsent

Diagnostic and prognostic significance of the disproteinemic syndrome
in rheumatic and infectious nonspecific polyarthritis (as particular
manifestations of collagen diseases). Vrach. delo no.9:121-122
S '60. (MIRA 13:9)

1. Kafedra fakul'tetskoy terapii (zav. - prof. B.A.Zalkind) Dnepro-
petrovskogo meditsinskogo instituta.
(ARTHRITIS, RHEUMATOID) (BLOOD PROTEINS)

DZYAK, V.N., dotsent; KUSHNEREVA, A.G., kand.med.nauk; BASHMAKOVA, I.N.

Clinical significance of some biochemical indexes in hypertension.
Vrach. delo no.4:140 Ap '61. (MIRA 14:6)

1. Kafedra fakul'tetskoy terapii (zav. - prof. B.A.Zalkind)
Dnepropetrovskogo meditsinskogo instituta.
(HYPERTENSION)

DZYAK, V.N., dotsent; BOGATSKIY, Ye.F., kand.med.nauk

Electrophoretic study of the protein composition of the blood serum in various clinical forms of chronic tonsillitis. Vest. otorin. no.6:31-35 '61. (MIRA 15:1)

1. Iz kafedry 2-y gospital'noy terapii (zav. - dotsen V.N. Dzyak) i kafedry bolezney ukha, gorla i nosa (zav. - zasluzhennyy deyatel' nauki UkrSSR prof. L.A. Lukovskiy) meditsinskogo instituta, Dnepropetrovsk.

(TONSILS--DISEASES) (BLOOD PROTEINS) (ELECTROPHORESIS)

DZYAK, V.N., prof.

Protein content of blood serum and colloid precipitate reactions
in subacute septic endocarditis. Vrach. delo no.12:69-75 D '61.
(MIRA 15:1)

1. Dnepropetrovskiy meditsinskiy institut.
(BLOOD PROTEINS) (ENDOCARDITIS)

DZYAK, V.N., prof.; VIL'KOVSKIY, L.V.

Pharmacodynamics of the Soviet preparation, nitrosorbid,
and its use in chronic coronary insufficiency. Vrach. delo
no. 5:23-30 My '62. (MIRA 15:6)

1. Kafedra gospital'noy terapii II (zav. - prof. V.N. Dzyak)
Dnepropetrovskogo meditsinskogo instituta,
(CORONARY HEART DISEASES)
(CARDIOVASCULAR AGENTS)

DZYAK, V.N., prof.

Clinical evaluation of the monocytic cup phenomenon (V.A.Valdman's test) in rheumatism [with summary in English]. Vrach.delo no.9:
27-30 S '62. (MIRA 15:8)

1. Kafedra gospital'noy terapii II (zav. - prof. V.N.Dzyak)
Dnepropetrovskogo meditsinskogo instituta.
(RHEUMATIC FEVER) (MEDICAL TESTS)

DZYAK, V.N., prof. ; MITROKHINA, L.A.

Study of the interparoxysmal period of rheumatic fever in a dispensary. Vop. revm. 2 no.2:63-68 Ap-Je'62 (MIRA 17:3)

1. Iz kafedry 2-y gospital'noy terapii (zav. - prof. V.N. Dzyak) Dnepropetrovskogo meditsinskogo instituta.

DZYAK, V.N., prof.

Clinical evaluation of the use of a new Soviet preparation,
erinit, in chronic coronary insufficiency and the signs of
stenocardia. Terap.arkh. 34 no.2:38-42 '62. (MIRA 15:3)

1. Iz 2-y kafedry gospital'noy terapii (zav. - prof. V.N. Dzyak)
Dnepropetrovskogo meditsinskogo instituta.
(VASODILATORS) (ANGINA PECTORIS) (CORONARY HEART DISEASE)

DZYAK, V.N., prof. (Dnepropetrovsk)

More on the pharmacodynamics of nitroglycerin. Vrach. delo
no. 6:23-28 Je'63. (MIRA 16:9)
(NYTROGLYCERIN—THERAPEUTIC USE) (CORONARY VESSELS)
(BLOOD—CIRCULATION, DISORDERS OF)

DZYAK, V.N., prof.; DROBACHEVSKAYA, A.A.; GRANOVSKAYA, S.V.

Some types of therapy in chronic coronary insufficiency.
Vrach. delo no.7:26-30 Jl'63. (MIRA 16:10)

1. Kafedra gospital'noy terapii II (zav. - prof. V.N.Dzyak)
Dnepropetrovskogo meditsinskogo instituta i dorozhnaya
bol'nitsa.
(CORONARY HEART DISEASE)

DZYAK, V.N.; FURS, I.T.; BEZBOROD'KO, B.N.

Comparative evaluation of the effect of some preparations from
the group of organic nitrates on the cardiovascular system
under experimental conditions. Farm. i toks. 26 no.1:47-52
Ja-F '63. (MIRA 17:7)

1. Kafedra gospital'nyy terapii No.2 (zav. - prof. V.N. Dzyak)
Dnepropetrovskogo meditsinskogo instituta.

DZYAK, V.N., prof.; FURS, I.T., dotsent

Diagnosis of chronic cor pulmonale combined with atherosclerotic
cardiosclerosis. Vrach. delo no.2:30-35 F'64 (MIRA 17:4)

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Dnepropetrovskogo meditsinskogo instituta.

MAZUR, O.E., inzh.; YASINSKIY, S.I. [IAsyns'kyi, S.I.], mekhanik;
DZYAKAN, I.P., brigadir traktornoy brigady; DONDRTATYUK, D.G.
[Kondratiuk, D.H.], mekhanik; STASYUK, G.V. [Stasiuk, H.V.],
mekhanik; KAPITANOY, P.S.

Our discussions. Mekh. sil'. hosp. 12 no.9:22-23 S '61.
(MIRA 14:11)
(Agricultural machinery—Maintenance and repair)

DZYAKEVICH, V.

YEMEL'YANOV, Yu.; DZYAKEVICH, V.; IGOSHIN, M.G., red.; BLAZHENKOVA, G.I.,
tekhn.red.

[Cutters with automobile motors] Kater s avtomobil'nym motorom.
Moskva, Izd-vo DOSAAF, 1957. 136 p.
(MIRA 11:2)
(Motorboats)

DZYAKEVICH, V. S., inzh.; ALAD'IN, V. N., inzh.

Design of a pleasure launch, Sudostroenie 28 no.10:35 0 '62.
(MIRA 16:1)

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(Launches)

DZYAKEVICH, V.S., inzh.; ALAD'IN, V.N., inzh.

Service transportation launch. Sudostroenie 31 no.1:45-47 Ja '65.
(MIRA 18:3)

DZYALOSHINSKIY, I.Ye.

Theory of the transition state of superconductors. Dokl. AN
SSSR 105 no.2:244-247 '55.
(MLRA 9:3)

1. Institut fizicheskikh problem imeni S.I. Vavilova Akademii
nauk SSSR. Predstavлено академиком L.D. Landau.
(Electric conductivity)

Dzyaloshinsky, I.Ye

USSR/ Physical Chemistry - Liquids and Amorphous Bodies. Gases. B-6

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7373

Author : Dzyaloshinsky, I.Ye.

Title : The Effect of Retardation on the Interaction of Neutral Atoms

Orig Pub : Zh. ellsperim. i teoreticheskoy fiziki, 1956, Vol 30,
No 6, 1152-1154

Abstract : A previously published calculation of the effect of retardation on the interaction of two neutral atoms (H. Casimir and D. Polder, Phys. Rev., 1948, 73, 360) gave a R^{-7} dependence of the energy on the distance R. The divergences which were found were excluded somewhat incorrectly. The author has applied the Feynman invariant method to the calculation of the effect of retardation on the interaction of two hydrogen atoms in the ground state and has rigorously derived a dependence which agrees with that obtained by Casimir and Polder.

Card 1/1

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Izayaloshinskiy, I.Yo.

Category : USSR/Atomic and Molecular Physics - Low Temperature Physics D-5

Abs Jour : Ref Zhur - Fizika, No 31 1957, No 6356

Author : Izayaloshinskiy, I.Yo.

Inst : Institute of Physics Problems, Academy of Sciences, USSR

Title : On the Instability of the Phase Boundaries Between Normal and Superconducting states.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 6, 1154-1155

Abstract : The instability of the phase boundary between the m and s phase relative to the periodic disturbances of the form of the boundary along the surface, found in Beck's paper (Referat Zhur Fizika, 1956, 13122), is explained by the fact that the London equations lead to a negative surface energy α on the phase boundary. Since the deduction concerning the existence of a negative surface tension contradicts experimental date, the author considers the problem of the stability of the phase boundary on the basis of the theory by V.L. Ginzburg and L.D. Landau, which gives the correct sign of α . Owing to the complexity of the general solution of the equations,

Card : 1/2

Category : USSR/Atomic and Molecular Physics - Low Temperature
Physics

D-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6356

the author considers only the case when the period of disturbance is much greater than the depth of penetration of the magnetic field into the superconductor. It is shown that in the case the separation boundary is stable, and for the fluctuations in the displacement of the separation boundary one obtains the following expression:

$$(\delta r)^2 = (4 \cdot k T / \Delta H_k^2) / n (\Delta / \lambda)$$

where H_k is the critical magnetic field and Δ is a constant. For Hg, and $T \sim 1^{\circ}\text{K}$ (far from the λ point), we get $\delta r \sim 10^{-7} \text{cm}$.

Card 1 2/2

DZYALOSHINSKIY, I. Ye. Cand Phys-Math Sci -- (diss) "The thermodynamical theory of the "weak" ferromagnetism of antiferromagnetics." Mos, 1957.
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10 pp (Acad Sci USSR. Inst of Physical Problems), 120 copies (KL, 44-57, 98)